Torch-X™ HQ

C5ISR system enabling multi-domain warfare and enhanced operational effectiveness for tactical, operational and strategic level HQ

Elbit Systems™
C4I and Cyber

Torch-X HQ

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Tactical, operational and strategic need

Multi-domain warfare requires an adaptable and secure framework to enhance operational effectiveness and strategic planning. To minimize the cognitive load on headquarter staff, the operational framework must be capable of efficient data management and seamless integration, as well as coordination and control of a wide range of manned and unmanned sensors and effectors.

Solution Overview

Torch-X HQ is a field-proven C5ISR solution for tactical headquarters (Battle Groups and Task Forces) and strategic headquarters (from Division level and up to the Joint Command). The cross-platform, comprehensive solution provides real-time data, advanced voice services and live video streaming with automatic, secure, location and COI-based dissemination of near real-time relevant information. Torch-X HQ allows headquarters to generate superior tempo relative to their adversary and shortens the decision-action cycle for the delivery of kinetic and non-kinetic effects in the battlespace.

AI-based decision support: Designed to meet the challenges of multi-domain warfare against a peer adversary, Torch-X HQ supports and optimizes planning and execution activities to meet the needs of specific military operations,s intelligence preparation of the battlefield, intelligence planning, analysis and scoping, Courses of Action (COA) development and testing, COA approval and orders distribution.

Planning processes supported by Torch-X HQ meet Five-Eyes network demands and military doctrines, including:

- Military Decision-Making Process (MDMP) – US Army
- Tactical Estimate Process (TE) – UK Army
- Staff Military Appreciation Process (SMAP) – Australian Army

Operation of manned and unmanned systems: Torch-X HQ includes operational features for manned and unmanned systems. The solution supports different levels of human involvement in tasking unmanned systems, from fully automated to semi-automated planning and execution. Torch-X HQ can be easily tailored to support any level of unmanned system autonomy.

Torch-X HQ

Open architecture: Torch-X HQ is based on Elbit Systems E-CiX framework. The fast and efficiently developed modular framework is based on commoditized existing building blocks using industry standards and open architecture, and offers its capabilities in an "as a service" model. It can accommodate third party applications and provides the development environment for future growth and requirements.

Intuitive user experience: A simple and intuitive web-based user interface, is based on the principle of recognition rather than recall at its core, using modern and familiar building blocks. This reduces both the cognitive load and training burden for the user. Torch-X HQ autopopulates key products as staff complete their decision-making process. Users can customize the Torch-X HQ operating picture to meet their specific staff cell requirements.

Security: Torch-X HQ is a secured battle management system, designed and developed as a secured system from the ground up. The system is accredited for the Five Eyes secret network and meets Five Eyes security standards. Torch-X HQ is penetration tested on a regular basis and updated to withstand new emerging cyber security threats.

Enhanced operational effectiveness and safety:

Optimizes operational activities by providing common situational awareness, messaging, command dissemination and decision support tools for headquarters of all echelons. AI-based decision support features reduce cognitive load and increase the operational tempo. Torch-X HQ supports multi-source live video feeds with augmented reality capabilities, bringing the real view of the battle enhanced with real-time data to increase effectiveness and safety.

Full spectrum support:

Supports all battlespace disciplines, including intelligence, operations, offensive support, Combat Service Support (CSS) and other Combat Support (CS) elements. Torch-X HQ seamlessly integrates with command center solutions for fixed and deployable shelters, mobile platforms and mobile dismounted forces.

Multiple interface connectivity:

Optimizes data collection and enhances interoperability across echelons, domains and coalition forces. Facilitates offline operational debriefing. Supports numerous interoperability standards to enable multi-domain dominance.

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Key Features

- Supports all battlefield domains and disciplines
- Powerful data synchronization that overcomes network limitations
- Distributed cloud-based architecture to facilitate continuity of operations
- AI-based decision support tools for battle planning and battle execution
- Autonomous nodes with no single point-of-failure
- Supports both human troops and autonomous robotic troops
- Supports numerous interoperability standards

Key Benefits

- Collaborative planning and battle management
- Common situational awareness
- Supports all military operations, structures and methods
- Simple and intuitive user interface

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